(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification⁷: H04B

(21) International Application Number: PCT/US01/49513

(22) International Filing Date:
26 December 2001 (26.12.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/257,398   22 December 2000 (22.12.2000)   US
60/257,637   22 December 2000 (22.12.2000)   US

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(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
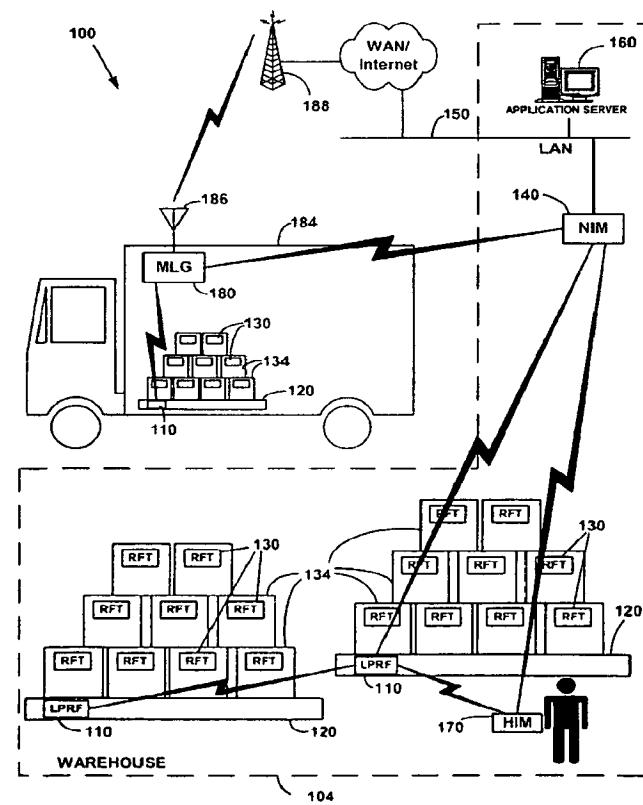SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA,
ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR,
GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent
(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG).

(54) Title: NETWORK FORMATION IN ASSET-TRACKING SYSTEM BASED ON ASSET CLASS

(57) Abstract: A plurality of wireless transceivers are
associated with assets and each transceiver is assigned
a class designation representative of an attribute,
characteristic, relation, or behavior of its respective
asset. Class based network formation routines are
utilized to establish hierarchical networks based on asset
classes, and the asset class is used by each transceiver
to screen communications intended for receipt by
transceivers of the same class. The overall wireless
data communication network results in reduced power
consumption and signal interference in asset-tracking
applications. The transceivers may include a query
handling routine for forming a dynamically distributed
hierarchical database system. Furthermore, a recipient
transceiver selectively receives communications from
other local transceivers by transmitting at incrementally
stronger power levels to successive groups of
transceivers, and receiving reply transmissions only
from a limited number of the transceivers that excludes
those transceivers from which communications already
are received.

WO 03/032501 A2

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Published:
—   *without international search report and to be republished upon receipt of that report*

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